

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010047**Date Inspected:** 07-Nov-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Zhu Han Shu, Mr. Lv Li Qing, Mr. Shen Fu You

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG BAY 2

This QA Inspector observed ZPMC welder Mr. Ji Hua, stencil 045227 has recently used flux cored welding procedure specification WPS-B-T-2233-TC-U4b-F to make OBG floor beam stiffener plate fillet weld segment SEG3004H-PP111-008. This QA Inspector observed a welding current of approximately 209 volts and 26.2 volts.

Mr. Ji Hua appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

OBG BAY 6

This QA Inspector observed ZPMC welder Mr. Lv Peng, stencil 048617 is using shielded metal arc procedure WPS-485-SMAW-2F(2G)-FCM-Repair to make shear link weld WDI-A305-77M2-50. This QA Inspector measured a welding current of approximately 230 amps. This QA Inspector confirmed that Mr. Lv Peng is certified to make this weld. ZPMC personnel had installed an electric heater to preheat the base material prior to

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commencement of the welding. This QA Inspector observed the E9018 shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

OBG BAY 13

This QA Inspector observed ZPMC welder Mr. Zhang Quin Quan, stencil 044774 is using flux cored welding procedure WPS-B-T-2233-TC-U4b-F to make weld SEG068A-016. This QA Inspector observed a welding current of approximately 210 amps and 24.6 volts and ZPMC QC Inspector Mr. Zhong Guo Hui is monitoring this welding. This QA Inspector observed that Mr. Zhang Quin Quan is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Front of OBG Bay 13

This QA Inspector observed ZPMC welder Mr. Yang Yunfei, stencil 215553 is using the shielded metal arc welding process WPS-B-T-2233-TC-U4B-FCM to make OBG weld SSD17-PP93-142. This QA Inspector observed ZPMC QC Inspector Mr. Guo Xing Hui has recorded a welding current of 175 amps and Mr. Yang Yunfei appears to be certified to make this weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is cool warm to the touch and the E7018 welding electrodes inside the storage container are slightly warm. ZPMC QC Inspector Mr. Guo Xing Hui confirmed the welding electrodes are not hot and he appeared to discuss the importance of keeping the welding electrode storage container hot with Mr. Yang Yunfei and the welding electrode container was then connected to an electric power supply. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Zhenbing, stencil 216086 is using the shielded metal arc welding process WPS-B-T-2233-TC-U4B-FCM to make OBG weld SSD16-PP92-146. This QA Inspector observed a welding current of approximately 180 amps and Mr. Wang Zhenbing appears to be certified to make this weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is cool warm to the touch and the E7018 welding electrodes inside the storage container are slightly warm. ZPMC QC Inspector Mr. Guo Xing Hui confirmed the welding electrodes are not hot and he appeared to discuss the importance of keeping the welding electrode storage container hot with Mr. Wang Zhenbing, and the welding electrode container was then connected to an electric power supply. Items observed on this date appeared to generally comply with applicable contract documents.

OBG BAY 14

This QA Inspector observed ZPMC welder Ms. Li Jiao, stencil 049861 is using shielded metal arc welding procedure specification WPS-B-P-2211 to make tack various welds between deck plate DP427-001 and a diaphragm plate. This QA Inspector observed a welding current of approximately 170 amps and Ms. Li Jiao appears to be certified to make this weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is hot to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Ms. He Junrong, stencil 201215 has recently used flux corded arc welding procedure specification WPS-B-T-2232-TC-U4b-F to complete weld SEG063B-018. This QA Inspector observed ZPMC QC Inspector Mr. Xu Tao has recorded a welding current of 217 amps and 24.9 volts and Ms. He Junrong appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Hi Hanbi, stencil 202122 has recently completed using flux cored welding process WPS-B-T-2232-TC-U4b-F to make OBG weld SEG063C-015. This QA Inspector observed ZPMC QC Inspector Mr. Xu Tao has recorded a welding current of 290 amps and 29.6 volts. This QA Inspector verified Mr. Hi Hanbi appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yun Chuan Shan, stencil 050316 has recently completed using flux cored welding process WPS-B-T-2231T to make OBG weld SEG055A-032. This QA Inspector observed ZPMC QC Inspector Mr. Xu Tau has recorded a welding current of 240 amps and 29.0 volts. This QA Inspector verified Mr. Yun Chuan Shan appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector and Caltrans Inspector Mr. George Goulet performed random visual inspections of OBG segment 7BE exterior surfaces. These interior surfaces had recently been gritblasted and the surfaces are now free of rust oxide and other contaminants that had previously obscured portions of the welds and base material surfaces.

The QA Inspectors visually observed approximately 100 locations which were subsequently ground by two ZPMC workers to blend pits and scratches in the base material and two welds required grinding to remove overlap and unacceptable weld profiles. Both QA Inspectors marked these areas using colored chalk and following grinding, the areas that were ground appear to comply with project specifications.

Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
